

Be sure to ask any questions through Slack!

Challenges:

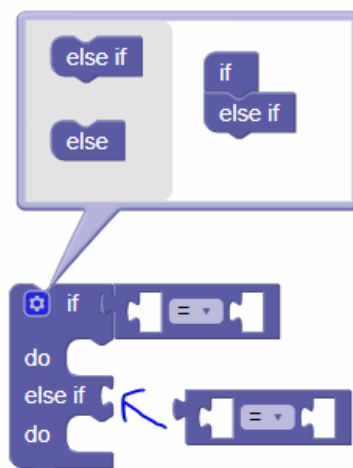
1. Create a new world in your project folder. Add a circular arena and three **solids** – one should be a box shape, one should be a sphere shape, and the last should be a cylinder shape. Make the box red, the sphere green, and the cylinder purple (hint: What colors do you combine to make purple? Also, purple is a darker shade of what color?). Add a bounding object to each shape and give them physics. Make sure they fall when you drag them upward and land on the circular arena.

Programming Challenges:

2. Print the word “hello” followed by the number 3 – use the “” block for the hello but use the number block (in the math section) for the 3.
3. Create a variable to store the number 3.5 and another variable to store the number 2.5. Create a new variable to store the sum of the two variables and print out the variable that stores the sum.
4. Create a variable named “x” and give it a value. Write a program that will print “a” if the value of x is less than 10 and print “b” if the value of x is greater than 10 (nothing should be printed if x is equal to 10).

Hint:

1. Drag out an “if” block under the “Control” category
2. Click the settings button in the top left of the “if” block
3. Drag an “else if” block under the “if” in the window that pops up.
4. Attach a comparison block (4th block in the “Control” category) to the right of the “if” and “else if”



5. Print every multiple of 3 from 0 to 99 (e.g. 0, 3, 6, 9, 12, 15, ..., 96, 99). Use a loop and print each number on a different line.

6. Repeat challenge 5, but make the program wait 100 ms (milliseconds, note that 1000 milliseconds = 1 second) in between each print. For example:

```
0 *pause 100 ms*
3 *pause 100 ms*
6 *pause 100 ms*
...
96 *pause 100 ms*
99 *pause 100 ms*
```

7. *Tricky one* Print every multiple of 10 from 100 to 300, but if that number is between 180 and 220, then delay for that number of milliseconds (ms). For example:

```
100
110
120
...
170
180 *pause 180 ms*
190 *pause 190 ms*
...
220 *pause 220 ms*
230
...
290
300
```